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Remarks

In view of the above claims and the following discussion, the applicants submit that the claims now pending in the application are not rendered obvious under the provisions of 35 U. S. C. § 103. Thus, the applicants believe that all of these claims are in allowable form.

Independent Claims 1 and 9 have been amended to avoid confusion and for clarification, to more clearly and distinctly claim the subject matter that applicant regards as the invention.

Response to Examiner's response to Applicants Arguments in item 4 at page 6 of the Office Action

Examiner's response to Applicant's arguments filed on 05/22/09 indicates two confusions.

First, of all it has to be clarified that the cited reference **Yoshiya** describes the average level and therefore Examiner's statement is wrong due to an interpretation that "it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute significant quantity at which brightness level occur with the average level".

Secondly, it seems that the Examiner reads: "significant quantity at which brightness level occur" instead of "significant quantity at which one brightness level occurs" and therefore was not able to recognize the structural difference of the present invention in view the cited references, which in addition to said difference has further distinguishing features.

The structural difference between Yoshida and Applicant's Application is based on several aspects as e.g.

- **Yoshiya** teaches that a "burning preventing circuit 8 inserts the average level value of the video signal into a margin section in which a valid video signal does not exist so that a difference in brightness

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deterioration between the image section and margine section of the display screen can be reduced as less as possible" (see abstract).

The present invention (2003) teaches structural improvements in such a way that

- instead of said

- average level value

- of the effective video signal in the television receiver –

- at least one predetermined signal is computed by
 - selecting a brightness level according to a significant quantity
 - at which one brightness level occurs
 - in an analysing area abutting on said one or more unused areas.

This means that according to the present invention:

- the source to control the brightness level of margine sections is different and

- the manner to control the brightness level of margine sections (brightness level according to a significant quantity at which one brightness level occurs in said analysing area – instead of average value), both are different in view of Yoshiya.

Furthermore, it would not have been obvious to one of ordinary skill in the art at the time of the invention to substitute

- the average level of the effective video signal

by

- a significant quantity at which one brightness level occurs
- in said analysing area abutting on said one or more unused areas,

because Yoshiya and the present invention are base on different principles.

- **Yoshiya teaches that the brightness deterioration between the image section and margine section of the display screen shall be reduced as less as possible. (Consequently, an average level of the effective video signal is selected for the sidebars, because the average level has the smallest deviation from the image**

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- section and seems to be the best mode to avoid differences in degradation degree between image and margine section.).

The present invention teaches to determine

- an analysing area abutting on said one or more unused areas and to use
- a brightness level, which occurs with a significant quantity in said analysing area.

This means that the present invention teaches to select a brightness level for said margine section (sidebars), which is coincident with the brightness level of most of the pixels (significant quantity) abutting on said one or more unused areas (margine section (sidebars)).

This is independent from a brightness deterioration between the image section and margine section as well as independent from differences in degradation degree between image and margine section, which illustrates in addition the structural difference between prior art and Applicant's Application as the means and the employed principle of the prior art and the present invention are different.

Furthermore, it could not be expected that a deviation from the concept to reduce the brightness difference between image and margine section as much as possible could similar reduce the marking effect and limit the disturbing effect of active sidebars in unused display sections as any deviation from using the average brightness value of the effective video signal in the margine section (sidebar) seems to increase the deterioration difference between image and margine section, which is stated as the reason of the marking effect for CRT television receiver by Yoshiya.

Nevertheless, both problems of active sidebars using an average brightness value (grey black) according Yoshiya – artificially aging the non active part in case of more dark pictures than luminous ones and unpleasant dark scenes having luminous sidebars (see page 3, lines 14 to

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34 of the present invention) - are solved by the present invention, which deviates from said average principle in that although said difference between brightness level in image and margin section is partly increased by not using said average value said burn effects and the disturbing effect of active sidebars are avoided by concentrating on the border region between image and margin section by using "one or more analysing areas within said display area directly abutting on said one or more unused areas" and concentrating on the brightness level, which "occurs in said analysing" with a "significant quantity". In such a way, due to computing a brightness level, which is coincident with the brightness level, which in said analysing area occurs with a significant quantity, it is ensured that in case of dark pictures also dark sidebars are provided and the brightness of the sidebars (unused areas) corresponds to the brightness of the picture area directly abutting on said one or more unused areas, which in a significant area avoids burning effects and avoids also artificially aging the non active part in case of more dark pictures than luminous ones. Nowhere in the prior art is a hint to such a principle and the means recommended and used according to the present invention and it could not be expected that deviating from the average principle could solve the aging problem of unused areas and in addition limit the disturbing effect of active sidebars in case of dark scenes.

This means that Yoshiya and the present invention are based on different concepts and have structural differences – so that consequently all the claims are patentable over Yoshiya. Also a combination of Yoshiya with Milch neither discloses nor gives a hint to the present invention or makes the present invention obvious as it e.g. already has been shown in Applicant's reply to the previous Office Action.

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REJECTIONS

A. 35 U. S. C. § 103

1. Claims 1-2, 9-10 and 15-18 are not unpatentable over Yoshiya

Independent Claims 1 and 9 have been amended for clarification and to more clearly and distinctly claim the subject matter that applicant regards as his invention.

In view of the above comments in Response to Examiner's response to Applicants Arguments in item 4 at page 6 of the Office Action, it has been clarified that the present invention is neither disclosed nor suggested nor obvious in view of Yoshiya as according to independent claims of the present invention "a brightness level according to a significant quantity at which one brightness level occurs in said analysing area" is used to compute the brightness level for unused areas, which avoids the prior art (Yoshiya) disadvantage that unused areas (active sidebars) are more bright than a big dark image section abutting on said unused areas, so that according to the present invention in case of dark or black pictures with some white points also said unused areas are dark or black and the disturbing effect of the unused display sections (grey sidebars in case of dark scenes) and the burning effect being avoided by the present invention.

It would not have been obvious to one of ordinary skill in the art at the time of the invention to substitute the average brightness level of the video signal with a brightness level computed according to a significant quantity at which one brightness level occurs in an analysing area abutting on said one or more unused areas as the present invention deviates from the teaching of the prior art, which teaches to reduce the brightness difference between image and margine section as much as possible by using said average value to reduce the deterioration difference between image and margine

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section. The present invention deviates from said teachings, structure and concept of the prior art in that

- an analysing area abutting on said one or more unused areas is used and
- a brightness level is computed according to a significant quantity at which one brightness level occurs in said analysing area, which is different in the principle, structure and concept of the prior art as it

is not based on the principle of similar aging image and margine sections as

- an analysing area abutting on said one or more unused areas is used, which means that only a part of the image and not the complete image is used to determine the brightness level of non-used areas (sidebars, margine section).
- for non-used areas (sidebars, margine section) a brightness level is computed according to a significant quantity at which one brightness level occurs in said analysing area according to the present invention, which is a further structural difference in view of integrating a video signal by an integrator 22 for providing the average level of the video signal.

The present invention teaches to compute a brightness level for non-used areas (sidebars, margine section) according to a significant quantity at which one brightness level occurs in an analysing area abutting on said one or more unused areas.

Furthermore, Examiner's statements: "However, it would have been obvious to one of ordinary skill in the art at the time of the invention **to substitute significant quantity at which brightness level occur with the average level** in order in order to suppress the marking effect and limit the disturbing effect of the unused display sections, as recited in claim 1." (See page 3, ll. 10 – 13 and page 4, ll. 18 – 21 of the Official Letter), **clearly indicates a confusion** between prior art and the present invention. Consequently, in view of 35 U. S. C. § 103(a) and converse to the Examiner's Statement, it has to be evaluated whether or not it would have been obvious to one of ordinary skill in the art at the time of the

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invention to substitute the **average level** with the **significant quantity at which brightness level occur in order to suppress the marking effect and limit the disturbing effect** of the unused display sections, as recited in claim 1 or more precise to substitute **average level** with evaluating the quantity of similar brightness level in said analysing areas and by **selecting a brightness level according to a significant quantity at which brightness level occur in said analysing area abutting on said one or more unused areas in order to suppress the marking effect and to limit the disturbing effect of the unused display sections.**

Applicants include also the arguments as provided in reply to the previous Office Action by relying on said reply to avoid repetitions.

The same reasons as mentioned above for claim 1 are valid for independent claim 9. Since independent claims 1 and 9 are believed to be in condition for allowance, the claims dependent thereon are also believed allowable.

The Examiner is correct in that "As to claims 2 and 10 Yoshiya teaches unused sections include sidebars (fig.6, item L2).", **however**, the brightness level for said unused sections including sidebars is generated different

- by different means,
- in a different manner and
- with different effect as disclosed in the claims, from which claims 2 and 10 are dependent on, which means that said dependent claims 2 and 10 are allowable.

The Examiner states: "As to claims 15-18, Yoshiya teaches driving means is capable of limiting the brightness of said at least one predetermined signal to a maximum brightness below the maximum practical brightness of the luminous elements of said display means (in the reference average level)(see constitution).

Claims 15 to 17 are dependent on allowable independent claim 9 and claim 18 is dependent on allowable independent claim 1 and are already due to the dependency from said allowable claims allowable because the structural

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difference of said independent claims in view of the prior art is not effected by the add one disclosed in said dependent claims.

2. Claims 5-8 and 13-14 are not unpatentable over Yoshiya in view of Milch et al.

Claims 5 and 13 depend from claims 1 and 9, respectively, and describe a method and device in which the signal is computed by evaluating brightness values concerning the quantity at which brightness level occur in one of said analysing areas and by selecting a brightness level according to a significant quantity at which one brightness level occurs - by "a histogram of brightness values of one of said analysing areas" for computing said at least one predetermined signal. This feature of claims 5 and 13 is neither disclosed nor suggested by Yoshiya.

This feature of claims 5 and 13 is not disclosed by Milch et al. either. Milch et al. relates to a method for reducing the power used by the display in a portable electronic device. A format pre-processing is used to modify the information format to reduce bright pixels in the display. The information content is not modified. Milch et al. teaches to reduce the light of some pixels (pixels of text within the display area) so as to reduce the overall average brightness of the display area. Milch et al. does not teach to modify the brightness of unused areas (outside the display area). Furthermore, Milch et al. does not teach to use analysing areas which are part or parts of the display area to modify the brightness of unused areas.

Furthermore, the combination of Yoshiya and Milch et al. fails to recite a method and device as described in claims 5 and 13 as according to claims 5 and 13 one or more analysing areas within the display area are defined. These analysing areas are selected to directly abut on the unused areas of the display area. They are used to compute the signal to be supplied to the unused areas (sidebars or margine section) by evaluating brightness values concerning the

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quantity at which brightness level occur in one of said analysing areas and by selecting a brightness level according to a significant quantity at which one brightness level occurs. This guarantees that the unused areas are adapted to directly adjacent areas. Thus, claims 5 and 13 are patentable over the combination of Yoshiya and Milch et al.

Claims 6-8 and 14 are directly or indirectly depend on claims 5 or 13, respectively. Therefore, for the same reasons as mentioned above for claims 5 and 13, claims 6-8 and 14 are also patentable over Yoshiya in view of Milch et al.

Furthermore, in addition to the already provided reasons for allowance in view of a combination of Yoshiya and Milch et al. it has to be noticed that Milch et al. neither discloses nor suggests "evaluating a histogram of brightness values ...concerning the quantity at which one brightness value occurs". Milch et al. teaches: "The information necessary to set the thresholds can be obtained from a histogram of the brightness code values of a particular image to be displayed, or from the histograms of a selection of representative images." (col. 3, lines 26 – 30). "The values and **threshold are chosen so that the average brightness** of the image or graphic is reduced." (col. 3, lines 20 – 22) That means that Milch et al. applies a histogram to determine and to reduce the **average brightness** of images, however, Milch et al. **neither discloses nor gives a hint to evaluate the histogram of brightness values ...concerning the quantity at which one brightness value occurs and to select the brightness level, which occurs in a significant quantity.** Consequently, also a combination of Yoshiya and Milch et al. neither discloses nor gives any hint to the present invention.

CONCLUSION

Thus, the applicants submit that none of the claims presently in the application are rendered obvious under the provisions of 35 U. S. C. § 103. Consequently, the applicants believe that all of the claims are presently in

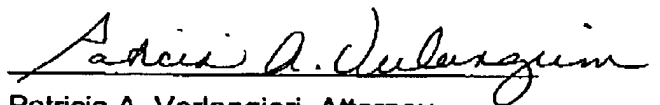
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condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Ms. Patricia A. Verlangieri, at (609) 734-6867, so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,



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